

ABSTRACT

A new method for improving the efficiency of electrodialysis (ED) cells and stacks, in particular those used in chemical synthesis. The process entails adding a buffer solution to the stack for subsequent depletion in the stack during electrolysis. The buffer solution is regenerated continuously after depletion. This buffer process serves to control the hydrogen ion or hydroxide ion concentration so as to protect the active sites of electrodialysis membranes. The process enables electrodialysis processing options for products that are sensitive to pH changes.